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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

AUGUST 5, 1916.

Reports for week ending July 29, 1916.

Akron, Report for two weeks ending July 29, 1916.

The past two weeks have been very hot and dry. Harvesting small grain was finished on the 27th. The winter wheat on the rotations was threshed on the 22nd. Yields vary from 4 bu. per acre on continuously cropped plats to 25 bu. on summer fallow. Oats were threshed the 24th and 25th. Yields vary from 21.6 bu. per acre on summer fallow to nothing in Rotation 42. Trees are suffering quite severely from drought. Corn is burned badly and a great deal of it will not tassel.

Maximum temperature for the week ending July 22, 97; minimum 55. Precipitation .04 inch.

Maximum temperature for the week ending July 29, 98; minimum 57. No precipitation.

Amarillo.

Uniformly dry weather continues to prevail over this section. The temperature daily has ranged regularly from around 63 minimum to about 93 maximum. Row crops are beginning to show seriously the effects of the drouth- though most of them would still recover if rain came soon. Corn has been making good growth, being now 3½ feet in height. The corn worm and smut are in evidence as usual. Soil sampling and threshing of the cereal nursery and varieties has been the main work for the week. Row crops are also being gone over for the third time with the cultivator. Reports indicate that a number of wheat fields arourd here are yielding up to 10 bushels per acre.

Messrs. Ross and Cron of the station have been up in Kansas on leave the past couple of weeks.

Max. temp. 95 on the 23rd and 24th.; minimum 61 on the 23rd. Average daily range 29 degrees. Hourly wind velocity 8.5 miles. Precipitation none. Evaporation 2.913 inches.

Ardmore.

Maximum temperature for the week 100; minimum 59. Precipitation .67". Total precipitation for the month of July 1.80 inches; same month last year 6.01 inches.

Harvesting of spring wheat, flax and oats was completed during the week. The yield of all small grain plats will be good. It is estimated that spring wheat will yield from 20 to 25 bushels per acre and winter wheat from 30 to 35 bushels per acre. Flax yield will be much better than a year ago when the average yield was 14 bushels per acre. All farmers in this section have good yields of small grain.

Corn and forage crops are in excellent condition. Corn in particular is much better than it was a year ago at this time. Last year corn smut was very bad. This year we have no smut at all.

Archer, Reports for weeks ending July 15th, 22nd and 29th.

Weather for the week ending the 15th was as follows:- Max. 91, minimum 49, mean 70. Evaporation 1.637 in. Wind velocity 4.3 miles. Precipitation .49 inch in 5 showers.

Weather for the week ending the 22nd was as follows:-Max. 93, min. 49, mean 73. Evaporation 2.229 inch. Wind vel. 6.0 miles. Precipitation .29 inch which fell in two showers.

Weather for the week ending the 29th was as follows:- Max. 93, minimum 49, mean 73. Evaporation 1.787 inches. Wind vel. ave. 4.7 miles. Precipitation .04 inch.

The weather has been hot and dry since the 9th with light winds each day. Crops are being forced to maturity due to lack of moisture, but are hanging on to a surprising degree. Many of the spring plowed plats of small grain are still showing a healthy color without burning, while some are burning slightly. The fall plowed small grain plats without exception are burning badly and will yield but little. The weed growth in them has been a serious detriment. Oats and wheat on green manure are the plats of the dry land series.

Corn on spring plowing has made the most aburdant growth with a few exceptions. Flax will be almost a minus quantity at this station this season as the weeds have gotten the head start and are keeping in the lead.

Some of the oat plats are beginning to turn color, and some on the fall plowed plats are drying out. Corn is tasseling and flax has passed the bloom.

The few winter wheat plats we had after the heavy winds of the spring were harvested on the 22nd and barley was harvested on the 26th.

Rex H. Wickham of the Office of Corn Investigations visited the station on the 8th. W. A. Lloyd in charge of County agent work in the Northwest for the Extension Service was also a visitor on the 13th. The annual Farmer Roundup occurred on the station the 20th and a small but enthusiastic crowd of farmer and town people were in attendance. The order of the day was talks by various scientific men, farmers and politicians, judging dairy cattle and horses and visiting the experimental plats. Coffee and buttermilk were served from the station and lunches were brought by the visitors.

John S. Cole visited the station on the 22nd and was present when the winter wheat was harvested.

On the 23rd A. P. Jacobson, a representative of the Danish government and Director of Extensions of the Co-operative Agricultural Associations of Sjaelland, Denmark, was a visitor.

Huntley.

The fore part of the week continued hot and dry, but the last two days have been rainy with a total precipitation of 1.32 inches. The first part of the storm was torrential and accompanied by a high wind which lodged some of the spring wheat and corn. Harvesting of the barley plats on Field G and the remainder of the flax plats on the rotations was completed this week. Spring wheat is about ready to cut.

Maximum temperature for the week 96; minimum 51.

Colby.

The week has been hot and windy though not as hot as the first three weeks of the month. Corn, which has begun to tassel, has been wilted all week. The chances for anything but stover are very slim. The sorghums, while not suffering severely are making but little growth. The D.L.A. small grains were threshed Monday and Tuesday. Winter wheat yielded well but the spring grains did not amount to much. The winter wheat averaged 22.0 bu., Plats M.C.A, B and C yielding 9.0, 18.5, and 26.0 bu. respectively. Barley-average, 9.7 bu., M.C. A 2.3, M.C. B 16.9, M.C. C 20.8; oats-average 6.2 bu. M.C. A 4.7, M.C. B 6.6, M.C. C 11.3; spring wheat-average 3.0 bu., M.C. A 2.0, M.C. B 5.3, M. C. C 5.3.

The early fall plowing and disking were finished yesterday. The ground was rather dry and hard and plowed up cloddy. All the remaining spring grain stubble plats, except the M.C. A plats were double disked on account of the heavy growth of Russian thistles and other weeds.

Max. temp. 99; minimum 60. Average hourly wind velocity (2') 11.9 mi., (8') 15.3 miles. Evaporation 2.794 inches. Precipitation none.

Dalhart.

All of the early and part of the late planted crops are suffering from drought. Practically all of the corn is fully tasseled, but as yet no ears are forming and it is probably that there will be no grain unless we have some good rains within the next few days which is extremely unlikely. Some of the corn plats are firing badly. The milo is heading and is standing the drought better than the corn but is much in need of rain. Weeds are very troublesome.

For the last 15 days 92 is the lowest minimum temperature recorded. The lowest minimum during this period being 60. Several hot winds have occurred during this time.

Max. temperature for the week 98; minimum 60. Precipitation none.

Edgeley.

The first two days were cool and cloudy, but the remainder of the week was hot and dry. The situation with regard to the wheat crop remains about the same as was reported last week, except that with the continued hot weather more of the wheat is drying up without filling properly and ripening. Oats are ripening rapidly. The most of them are filling good and will probab yield well. The straw on all of the grain seems to be weaker than usual and much of it is going down. After a heavy wind and high temperature all day Friday, the oats on many of the plats look as though a hail storm had struck them. On rotations 1, 2, and 3, from 50 to 70 per cent of them are crinkled down in this manner. The barley on the plats is ripe and ready to harvest. Early barley seems to be the best crop around here this year, but there is little of it.

Edgeley, Continued.

The brome grass and second cutting of alfalfa were mowed Wednesday and hauled in Friday. The yields per acre were as follows:-

Brome	Rot. 10	1914	seeding	4400#	
		1915	"	3800#	
	Rot. 12	1914	"	6400#	
		1915	"	4400#	
Alfalfa		1914	"	2300-	total for year 5350# per acre.
		1915	"	2200	" " " 4880# " "

This years seeding of alfalfa and clover were also clipped.

Saturday evening a heavy rain orrucced which will help the later barley and oats, and the flax considerably.

Max. temp. 98; minimum 45. Precipitation 1.21 inch.

Garden City.

No precipitation was received during the week, but most of the crops on the station are holding out very well considering the long spell we have had. All of the spring plowed corn plats on the rotations are past redemption and will be harvested immediately. On the fall plowed plats corn is still green and will make considerable fodder should rain come soon. On the M. C. corn plats, spring plowing is showing up better at present than fall plowed plats, though the reverse was the case three weeks ago.

On the seed bed work with sorghums those methods are showing up best where the land was fall plowed or listed and given varying amounts of cultivation before seeding. On the M. C. work with milo and kafir the fall plowed plat is suffering more from drouth than the spring plowed plats.

Freed Sorghum is making a very good showing this year. It is fully headed and will probably make some grain, even though we should receive little precipitation the remainder of the season.

The two plats of Sudan Grass on the Dry Land project are drying up.

Most of the week was spent in making an auto trip over a good portion of southwestern Kansas in company with M. L. H. Gould District Agricultural Agent for this section of the state.

Crop conditions were much better than the writer expected to find them. Crops on sandy soils are generally more advanced and in better condition than those on the heavier types of soil. Some good fields of corn were seen; this crop however was generally short but still in fair condition. There is a considerable acreage devoted to corn this year, but the sorghum crops are greatly in the majority. Most of the fields seen were pretty free of weeds and in many of them there could not be seen any weeds at all.

Two methods of conserving precipitation, which are somewhat different from those ordinarily employed, were observed while on the trip. One rancher had constructed dykes across the prairie in such a way as to divert the run-off occurring from heavy rains on to his farm land. The crop on this land was superior to those of his neighbors.

Garden City Continued.

Another man subsoiled in the lister furrows to a depth of about 18 inches, and the crop planted in these furrows was cultivated in such a way that a depression was left in the row throughout the season to catch rainfall. While crops on land treated in this manner were doing well, they were on sandy soil and the subsoiling was probably of very little benefit.

Considerable of last years crop is still in the stack, and many of the ranchers say that prospects of a failure this year is not worrying them any.

Max. temp. for week 101, minimum 64. Ave. wind vel. 2 ft. ane. 10.4 miles, 8 ft. ane. 15.0 miles. Evaporation 3.260 inches.

Hays.

Max. temp. for the week 103, minimum 62. Precipitation none.

Dry hot windy weather prevails. All row crops needing rain badly. Corn is suffering very much, and sorghums also wilting badly. Kafir is beginning to head.

During the week all fall plowed plats for winter wheat were plowed and packed, and most of the plats to be fall plowed for spring crops were double disked in order to kill weeds and sprout scattered grain before the plowing is done to avoid so much work after plowing to kill volunteer grain.

Soil sampling has been in progress all week.

Corn on rotations 2, 53, 54, 141 and 142 has been completely dried up within the last few days and was harvested Saturday the 29th.

Lawton.

Although the weather has been warm during the past week the temperatures have not been excessively high. Crops that are not being damaged by chinch bugs have made satisfactory growth. Silver king corn planted on the west end of the farm was cut 7/28. The corn was not well enough matured for harvest but chinch bugs were so destrictive that the plants were dying and falling to the ground. The corn was in about the right stage for silage when it was cut.

Corn in Field B is also beginning to go down pretty bad and it will undoubtedly have to be cut pretty early. The MC series of corn in the plats is still green and has good prospects for a good yield. This is the only corn in the plats that will give any data this year.

The fall army worm attacked the late corn and kafir corn in the plats during the week and were working rapidly and destructively when we found them. We immediately sprayed with the following solution: Paris green 1 lb., slacked lime 1 lb., water 50 gallons.

This corn was planted the first of July and was better than knee high at the time of spraying. The worms were working in the heart of the plants and it was necessary to put the poison in the same place. We killed about 99% of the worms but we also severely burned the plants. At the present writing it is thought that the most of the plants will recover from this injury but recovery will be slow and growth will be seriously checked. I find

Lawton Continued.

the same worms working on kafir corn in Field B but this kafir is a good deal older and larger than the kafir and milo in the plats and the worms are urable to do as much damage. In case they become destructive there we will try the poison bran mixture -placing it in the heart of the stock. It is barely possible that the worms will be attracted to this poison and eat it rather than the foliage of the plant.

Cowpeas in the plats are making a heavy growth and we anticipate considerable difficulty in plowing them under in good shape. Winter rye was again seeded in Rotation 251B on the 29th.

Series land 2 in field B is being plowed at the present time. This ground was disked after the harvest of oats and is plowing in fine shape at the present time.

Big Springs.

Max. temperature for the week 100, minimum 66, wind velocity 5.0 miles per hour. Evaporation 2.46 inches. Precipitation .46 inch. Crops were revived considerably by the shower received on Friday, but more rain is needed to do much permanent good. Up to date we have received .66 inch during July, which is considerably below normal.

The Sudan grass harvested the week before averaged 1800 lbs. of hay to the acre. One plat of early buff peas weighed out 1600 lbs. of pea hay to the acre. Some of the later varieties promise a heavier yield than the early buff. Four plats of alfalfa planted in 36-inch rows in April was clipped during the week, but the yield of hay was light. A number of the varieties of grain and sweet sorghums have headed out. Milo on fallow and fall plowed has headed out at a height of two feet to 36 inches. These plats are in the rotation and C.C. series and will make a fair yield in spite of the continued drouth. Cotton on the fall plowed and fall listed plats is doing fairly well, but this crop on spring listed and spring plowed land had to be replanted, consequently the stand is not so good and the plants are small. Birds are bothering the grain sorghums, especially milo and feterita, and will reduce the yields on some plats fifty per cent.

All the crops on tight or heavy land are about a failure this season. The crops on the sandy soils have as usual stood the drouth the best

The wind velocity for July has been much below normal, which has caused a shortage of water for stock purposes where the supply has been furnished by windmills.

Scottsbluff.

The temperature has varied from 89 to 98 during the week with very little wind prevailing. A shower of .37 inch afforded some relief.

Barley, winter wheat and some of the spring wheat have been destroyed. The latter is ripening very unevenly. Some of the plats have not yet begun to turn. The oats will be a failure on account of the late reseeding, hail and dry weather.

There was a 400 foot break in the Reclamation canal on the 23rd. Water is expected in again about August 2nd.

Mandan.

All oats in the rotations were harvested during the week. This is the earliest oats that has been cut on the station. Barley will be ready to harvest the fore part of the coming week.

Both stem and leaf rust are abundant on the barley and wheat. The black rust stage is just starting to develop. Very little damage from rust will occur in rotations or variety tests on the station. Rust is reported as bad all over the country here.

A very hot wind blew the afternoon of the 28th. Corn is making rapid growth and is now fully tasselled, about two weeks ahead of last year.

The small fruit varieties are all yielding well, including currants, gooseberries and raspberries. The harvesting of tomato varieties began on the 28th.

All vegetable varieties have made a good growth and such as have been harvested have given good yields.

Mr. Peterson and Mr. Pfaender made trips into the country during the week and collected fruits of native Juneberries, gooseberries and strawberries and located hazelnuts and sand cherries for picking later.

Max. temp. 98 on the 28th; minimum 50 on the 24th.

Precipitation 1.21 inches in three rains.

North Platte, Report for week ending July 22.

The weather has continued warm and dry. There has been no rain for 32 days. Harvest on the station will be finished the first of next week. Two fields of grain on the bench have been threshed. The maximum yield of winter wheat on summer tillage was 50 bushels per acre. Threshing of plats on the table was begun yesterday.

Yields from the deep vs. shallow tillage series for winter wheat are as follows:

Preparation	# of plats	Bu. per acre
Disked	2	26.3
Plowed 3"	4	25.4
7"	4	28.8
10"	4	32.2
14"	4	29.4
Early Plowed	8	29.5
Late "	8	28.5
Packed	8	31.7
Not packed	8	26.2
Average	18	28.8

Maximum temp. 100; minimum 55; mean 78, 4 above normal. Precipitation none.

Mr. Cole visited the station Thursday, July 20th.

North Platte, Report for week ending July 29th.

The weather continues dry and hot. With but three days remaining, the July rainfall is practically nothing. Corn is suffering badly and unless rain comes very soon it will be a total failure. Nearly all the tassels are out but it is too dry for the silks to emerge. The results will be the loss of the greater part of the pollen unless relief comes very soon.

Threshing will be finished next week. The grain is of very good quality, but the yields are considerable less than those secured last year.

Sheridan.

The week has been fair with no rain and little wind. Temperatures have continued to be high and crops have made splendid growth on the farms where there was an ample supply of moisture.

The sorghum for forage seeded June 23 now stands 6 to 8 inches high and has a healthy color regardless of the dry weather.

Building is going steadily forward. The Barn and Implement Shed is being sided, the Residence having the rafters put in place and the Office Building having the cornice put on. The Mess house is being painted and the carpenter work on it is practically finished. The wiring of the Residence and Office Building is being done.

Land is still being broken, with 4 horses, but it is getting so dry that the plow will only stay in the ground with difficulty. It is a hard draft on horses at this season.

Tucumcari.

Max. temp. 101 on the 24th; minimum 64 on the 25th. Evaporation 2.783. Precipitation .08 inch on the 29th.. Wind velocity 6.7 miles per hour.

During the first part of the week all small grains which are to be threshed were threshed. None of the grain will weigh outtheavier than 3 or 4 bushels to the acre. It was thought unnecessary to thresh several of the plats as all that could be seen were weeds. No grain visible. Russian thistles are one of the hardest things there are to thresh in a small sized machine.

Other work for the week has been the ordinary routine.

The daily weather prediction sheets we receive from the Denver Forecast Station of the Weather Bureau have, each day, for the past week stated "For north-eastern New Mexico, rain tonight or the next day". It is true that the sky has clouded up nearly every evening lately, but up to last night no precipitation has taken place. It is hoped that this small rain is a forerunner or more which is to come, as it is still not too late to make fair yields of most of the crops. If no more precipitation falls in July we will be over 2.00 inches below normal for this one month. We have had less than .75 of one inch this month, and the normal for July is 2.68".

Williston.

Weather for the week has been hot and dry. Crops are beginning to suffer for lack of moisture, and the fields of lighter soil show drying to a considerable extent within the past few days. While reports of rust from many sections of the state indicate that crops are in danger there, this section has very little rust, and more danger is feared from drought than from rust.

Barley is ripe and will be cut the first of next week. It is well filled and should yield heavier than last year. Oats and wheat are beginning to turn, and still look fair. The flax in rotation 12 shows up very well, and is best appearing of any flax in this rotation for some years. Corn is doing very well, and prespects are for a good crop providing the frost holds off long enough.

Maximum temperature 89 degrees; minimum 56 degrees. Precipitation .30 inch, .28 of which came today.

Woodward.

Today completes a thirty-five day period of hot calm days, during which not a drop of rain has fallen. Nothing however has been killed by the drouth, and on the whole crops on the station are looking remarkably well. This is due, on some parts of the station at least, to the fact that the clay underlying the top soil at from three to ten feet has prevented the rapid seeping away of the excessively heavy rainfall of June. Some of it, running through the surface sandy soil, is still stored in the subsoil and is being used by the crops.

The week past was consumed in hoeing, cultivating, and watering of the more recently planted trees, which have not rooted deeply enough to obtain moisture from the subsoil.

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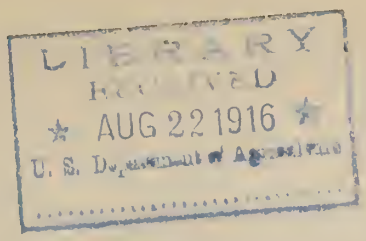

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

AUGUST 12, 1916.

Reports for week ending August 5, 1916.

Akron.

We have had five small showers in the past week which have interfered with threshing. Thursday P. M. a part of the spring wheat on the rotations was threshed. The highest yield so far recorded was 13 bushels per acre on Rotation 5. The lowest yield was 0.0 on Rotation 58. The rabbits ate the few stalks that headed. Rabbits are unusually plentiful this year.

Dr. L. J. Briggs returned to Washington on the 4th.

Max. temp. for the week 95, minimum 57. Precipitation 1.57 inches.

Amarillo.

Another week of drouthy weather has passed over us. Row crops are putting up a heroic and desparate struggle. Corn has commenced tasseling and milo in fallows and rotation plats has commenced heading at a height of 2 feet. Stand counts of the row crops have been made during the week. Plowing and lister furrowing of plats for winter wheat in the C. C. series has been done, but early fall plowing generally of the plats intended for this is being delayed in hopes of rain.

Weather for the week was as follows:

Max. temp. 97 on August 2nd.
Min. " 62 on July 30 & 31.
Hourly wind 6.6 miles.
Precipitation .53 inch on July 29th.
Evaporation 2.419 inches.

Weather summary for July:

Max. temp. ..... 101.
Ave. Max. Temp..... 94.
Min. " ..... 58.
Avg. Min. " ..... 62.
Mean " ..... 78- 2 degrees above normal for month.
Average hourly wind velocity 7 miles.
Precipitation 1.17 in. (1.7 below normal for July).
Evaporation-6ft. tank ... 11.651 inches.
" -8ft. " ... 11.285 inches.

Note: Up to August 1st, we have had 7.28 inches of precipitation which is 6.9 inches less than we had till that date last year and is 5.7 inches below normal for the first seven months of the year.

Dalhart.

The weather continues dry with but little change in temperature and considerable wind. For the past 40 days 86 is the lowest maximum temperature recorded and there has been but 4 days that the maximum temperature has been below 90. The crops are holding up much better than would be expected considering the fact that they have had no rain since the 4th of July. The winter rye from Rot. 84, 87, 88, and 89 was threshed during the week, but the yield was light, from 4 to 6 bushels per acre.

Maximum temp. for week 98, minimum 61. Precipitation none.

Big Springs.

The past week has been very favorable for crop growth, the conditions being better as a whole than at any previous time during the season since the crops were planted. Maximum temperature for the period 93, minimum 65, wind velocity 4.1 miles, evaporation 1.71 inches, precipitation since Saturday morning the 29th 1.82 inches. This with the .46" received on July 28th, brought the total up to 2.28". The showers came in such a manner that very little loss from runoff occurred on cultivated ground. All the crops have responded to the favorable conditions and are springing in to new growth. Some of the crops had matured to such an extent that it is a question whether the yield will be increased very much on some of the plats.

Several acres were planted to sudan grass, feterita and cowpeas for feed. German millet was planted in rotations 218 and 217 and one plat each of common, kursk, turkestan, tambov proso and black vorenzh millets. The rains caused the weeds to germinate thickly and the latter part of the week was spent in cultivating various plats and fields. The second crops are getting ripe and will be much better than the first crop, both in quality and size. The farmers throughout the county have been planting quite a lot of feterita and sorghum for forage,-considerable dwarf milo has also been planted. The usual frost date for the Big Springs district ranges from Nov. 1st to the 15th. This gives this section a long growing season and enables us to plant early or late as conditions exist. The second crop of sudan grass is about ready to cut, and the indications are that the yield will be better than the first.

Colby.

Rain has threatened every night this week but only little has fallen, and the hot weather continues to get hotter. On all plats but M.C. C corn is suffering very much. All prospects for corn on the surface planted plats are gone. Milo and kafir are about eighteen inches high. The surface planted plats of the sorghums were cultivated the second time this morning. All the fall listing was done Wednesday.

Weather for the week:- Maximum temperature 104, minimum 60, average hourly wind velocity (2') 6.1, (8') 9.3 mi., evaporation 2.539 inches, precipitation .15 inch.

Weather for the month:- Maximum temperature 100 on the 3rd and 21st, minimum 53 on the 7th, ave. maximum 95-1915 83, ave. minimum 63-1915 59, ave. hourly wind velocity (2') 8.1-1915 5.5, evaporation 10.987"-1915 5.980", precipitation 2.07"-1915 6.60", normal 2.64 inches.

Huntley.

The greater part of the week was spent in harvesting spring wheat and in threshing winter wheat, rye, barley and peas. Yields were low and except for the rye the quality of the grain was poor, most of it being shrunken and off color. Average yields were as follows:- Winter wheat 18.0 bu. per acre, Barley 18.9 bu. per acre, Rye 19.2 bu. per acre, Peas 10.9 bu. per acre. Max. temp. for week 97, minimum 50. Precipitation .04".

Ardmore.

Maximum temperature for the week 97, minimum 53. Total precipitation .16 inch. The weather has been favorable for the growth of corn and forage crops. Frequent small showers during the last month have provided sufficient moisture to prevent all cultivated crops from suffering from the want of moisture.

Grass on the range is badly in the need of moisture although there is still abundant pasture. Most sections however are badly in need of stock water. Water holes are practically dry, and in some instances it has been necessary to move cattle many miles for water.

The small grain crop throughout this county is exceptionally good. Many fields of winter wheat have been observed which will yield from 25 to 30 bushels per acre. Spring wheat is not quite so good with the farmers, but much of it will make 25 bushels per acre. Most of the oats did not fill well and the yield will be light.

Threshing will begin on the station during the early part of next week.

Bellefourche, Report for week ending July 29.

Continued dry hot weather during the first part of the week hastened the ripening of all crops. On the 27th a hot wind with a temperature of 103 degrees damaged the wheat to some extent. Nearly an inch of rain fell on the 28th and 29th, but this was too late to be of any benefit to grain crops.

All oats and barley have been harvested and practically all of the wheat is ready to harvest.

Mr. J. Allen Clark has been at the station for almost a week.

Maximum temperature 103, minimum 57. Precipitation 1.00 inch.

Bellefourche, Report for week ending August 5th.

The weather continues warm and dry. All harvesting of small grains on the dry land plats has been finished. Yields will probably be above the average.

The wheat and oats on fall irrigated land were cut on the 5th. The feeding depth of these crops seemed to be between 2 ft. 3 in. and 2 ft. 8 in. Alfalfa used moisture to a depth of at least four feet. Row crops have not shown any lack of moisture as yet.

Precipitation for the first seven months of the year are as follows:

Jan.	.36	in.
Feb.	.23	"
Mar.	.98	"
Apr.	.64	"
May	3.17	"
June	2.19	"
July	2.01	"
Total	9.58	"

The max. temperature for the week was 96, min. 56. Precip. .21".

Edgeley.

Harvesting has been in full blast throughout this section of the state during the entire week. The early barley and oats were harvested, and the wheat is now being cut. Owing to the weak straw, all of the barley, a large part of the oats, and some of the wheat on the station went down badly. Grain all over this section of the state is down in the same manner, causing it to look very much as though it had been hit by a hail storm. There has been some hail in various sections also.

A trip was made with the Superintendent through the country about thirty miles south of here the latter part of the week. Grain there is slightly worse than here, and aside from that, all the lower places are under water, due to the heavy rains during the past month that did not strike farther north.

Max. temp. 91, minimum 54. Precipitation .47 inch.

Garden City.

The continued dry hot weather of the past week has been severe on all crops. Some of the kafir and milo have quite a few of the upper leaves dried up.

A number of the corn plats were harvested the fore part of the week.

Max. temp. for week 105, minimum 63. Ave. wind velocity 2ft.ane. 7.3 miles, 8ft ane. 10.7 miles. Evaporation 2.105", precipitation none.

Summary of precipitation and evaporation measurements for July:

	Normal
Precipitation 0.20"	2.26"
Evaporation 13.103"	10.571"

Total precipitation to date 9.0 inches which is 2.44 inches below normal.

Havre. Report for week ending July 29.

On the evening of the 26th we had another torrential rain which have been so prevalent this month. At the station 1.45" fell in about an hour while at Havre there was 1.84" in the same storm. Some of the spring wheat is slightly lodged but other grains have straightened up nicely. None of the crops have suffered from lack of moisture. Barley, oats and winter wheat will start during the coming week. Corn is tasseling well and is nearly waist high.

A small farmers' picnic was held at the station on the 25th with an atterdance of about 150. Although the crowd was small the interest and enthusiasm was good. A North Montana Farmers' Picnic Association was organized and it is planned to advertise and have a large attendance next season. With conditions as they are at present we could not well handle a very large crowd.

Chancellor Elliot of the University of Montana and Director Linfield of the Montana Experiment Station were here on the 29th looking over the buildings and the work.

Max. temperature 85, minimum 49, precipitation 1.78 inches.

Havre, Report for week ending August 5.

The weather during the past week has been quite favorable for the normal ripening of small grain and for the growth of corn. This is the first week since early in June that we have not had a fair amount of precipitation. The total precipitation for the month of July was 5.20". This is the largest amount recorded since 1884, and only twice in 35 years records has there been more than 5 inches. However, so much of the rain has fell in torrential storms that crops have not derived the benefit that might be expected from this amount of rain. Maximum temperature for the week 89 on the 2nd., minimum 46 on the 3rd., with no precipitation.

Corn is almost shoulder high and is well along in the silk. The most of the oats and barley and a few plats of winter wheat were harvested during the week. None of the crops so far have suffered for lack of moisture. Hot dry weather will be necessary for the maturing of the corn.

A trip was made on the 31st to the western part of the county, in company with Director F. B. Linfield, State leader M. L. Wilson, Hill County Agriculturist and a number of farmers and business men living in the eastern part of Hill County. A very large contrast was noted in the grain fields due to previous treatment. Even with the heavy precipitation of this year there will be fields of spring wheat that cannot yield more than 12 or 15 bushels, while there are many fields that will yield better than 40 bushels. Alfalfa seed in the Milk River Valley will be as short this year as last. Three foot rows were seen on this trip that are seeding very heavily.

Hays.

Max. temp. for the week 108½, minimum 66. Precipitation none, -Not so much as a sign. For the past four days the maximum has not been less than 103, hot winds every day, and average evaporation nearly .55".

All crops suffering very badly.

Remainder of the corn on theproject except M.C. plat F dried up and was harvested yesterday. The few ears on the stalks were fairly well matured, but will shrivel some. Fodder was all dried up and was blowing off.

During the week the remainder of the winter wheat plats which were not sampled to depth of 6 feet for moisture have been sampled to that depth. M. C. Corn plats A, B, C, and D were soil sampled to a depth of 10 feet and plats E and F to a depth of 6 feet, today. Nitrate determinations were made on M. C. Corn plats A, B, C, and D yesterday.

A few more pounds of poison bran was scattered over the project the first of the week for grasshoppers.

Mandan.

Haying was carried on during the week. The prairie hay crop is excellent.

Mr. Pfaender visited the Dickinson Sub-station and Mr. Killand spent some time in the fruit growing section near Lake Minnetonka, Minn.

Barley and wheat were harvested during the week. The yield of wheat on the station will be good. Wheat in general in this section is badly damaged by rust. Some fields will not be cut, while others will produce a very light yield.

Corn is still making a good growth, but needs rain soon.

The precipitation to August first is 1.26" below normal.

Max. temperature 98, minimum 54. Precipitation .07 inch.

North Platte

Several showers have occurred during the week, totaling .64 inch on the bench and .31 inch on the table. This has not been sufficient to help the corn to an appreciable extent, although the decline has been less than for several weeks previous.

July weather summary:

Mean maximum temperature 93
Mean minimum temperature 65
Mean temperature 79 (5 degrees above normal)
Precipitation,-.40 inch on table; .76 inch on bench;
.59 inch at North Platte Weather Bureau;
deficiency for July 2.28 inches,-since Jan. 1,
4.69 inches (36.3 per cent of normal for period).

Threshing has been completed, with the exception of sweet clover and alfalfa.

Scottsbluff.

Harvesting of spring wheat was finished during the week. We expect to thresh this coming week.

Corn is in splendid condition owing to a 1.09" rain which fell July 29th and 30th. This made a total of 1.87" precipitation for July, .23" under the 21 year average. Evaporation for the month was 8.478" or, .907" in excess of the five year average.

The Annual Farmers' Picnic was held yesterday, August 4th. A large crowd was out to see the Station and seemed much interested in the work.

Woodward.

The past week has been dry and hot. Much more evidence of lack of moisture in the soil is showing in appearance of crops than at any previous date. Part of the corn, being beyond recuperating was cut. Other corn is suffering severely and will be cut next week, but is far enough along to make a fair grain yield. Most of the broom-corn managed to get far enough out of the boot so the yield will be fair. Other sorghum crops run a very good chance of having the blossoms blighted that the grain yield will be small even if rain comes. Mr. Rothgeb arrived from Amarillo August 4th. It has been an even six weeks since any rain fell.

Tucumcari.

Evaporation 2.358 inches. Precipitation .24 inch on the 29th., and the 31st. of July. Maximum temperature 97 on the 3rd. and 4th. Lowest temperature 63 degrees on the 31st of July and 1st of August. Average hourly wind velocity 5.7 miles per hour.

During the week all row-cropped plats of Rotations and Continuous Cropping work were cultivated.

The total rainfall for July was .98 inch on the station. This is 1.7 inches below our eleven year average. With this shortage in July we were exactly 5.00" below normal on August 1st. Rainfall from Jan. 1 to July 31, 1916 amounted to 4.51 inches. The normal is 9.51 inches. Except for 1910 this year has been the driest on record. It was drier in 1908 up to July 1st., but in 1908 there was a precipitation of 3.45 inches in July. We have not had a rain on the Station since in April which made "moisture meet" on level ground.

In spite of the extended drouth the crops do not show signs of suffering except by their size. Some corn is badly burned, but all other crops have a healthy color, there not even being any burned leaves at the bottoms. Milo is all headed at an average height of about 30 inches. Birds are very bad this year and eat the grain from the heads nearly as soon as the grain forms. While our sorghum grain yields would be fair to good without the birds, it is doubtful if there will be anything to harvest if the birds remain.

Williston.

Very warm weather the fore part of the week until the afternoon of the 4th inst., when the temperature rose to 96 degrees. This was followed by cooler weather and rain, and it is believed that the summer's extraordinary hot spell is broken.

The barleys and some of the earlier wheat plats were cut during the week, and most of the balance of the dry land rotations will be cut early next week. The heavy rain accompanied by wind today, is laying over and tangling the durums and oats badly. Corn is doing very well, and is advanced about normally for this stage of the season. Indications are that crops on the plats this year will exceed those of 1915.

While no rust is present on the dry land plats, there is a trace of both stem and leaf rust on low areas of the station, and there is more or less rust in this whole section. The later crops, of which there are more than usual due to lateness of the season, will suffer greatly from the rust. This section will, however, harvest a larger average crop than that part of the state east of us.

Precipitation today 1.58 inches, total for week 1.98 inches.

Max. temperature 96, minimum 55.

GENERAL NOTES.

MEMORANDUM FOR THE FIELD MEN OF OFFICE
OF DRY LAND AGRICULTURE.

We are in receipt of order from the Office of Records from which the following quotation is extracted:-

"It is very necessary that coupons of transportation requests be mailed to this office as soon as the originals are exchanged for tickets and I will be glad if you would instruct the men of your force in this respect. There are explicit instructions on the back of the coupons as to the disposition of same * * * . I would be glad to have your cooperation in this matter".

It is therefore requested that field men will see that all coupons of transportation requests are promptly forwarded to this office. Where a trip is made of short duration and voucher is promptly prepared for expenses, it will be all right to have the coupons of transportation requests accompany the voucher, but where a protracted trip is made and a considerable number of days elapse between the use of the transportation requests and the preparation of the expense voucher, the coupons should not be held until the preparation of voucher, but promptly mailed to the office of Dry Land Agriculture.

The men are also requested when listing on their vouchers cash fares paid between travel points, to state railroads over which such cash fares were paid. When pullman berths are used they should also state upper or lower berth.

It is also requested that itinerary reports invariably accompany form 4 vouchers as considerable delay in payment of vouchers has been occasioned in the past by failure of the men to accompany their vouchers with itinerary reports.

The employment of skilled laborers requires official appointment from the Civil Service authorities. Should the emergency arise requiring the services of a skilled laborer or a few hours or 2 or three days he may be employed without appointment, if, at the time form 3 voucher is submitted for his salary and exigency statement is submitted showing the necessity for his immediate employment without appointment and stating that his services were only required for a few hours or days. Once a skilled laborer has been appointed and his appointment subsequently terminated he cannot be employed further without a new appointment, unless in the event of his services being required and utilized for a few hours or one or two days after his appointment has been terminated an exigency statement by submitted as indicated above.

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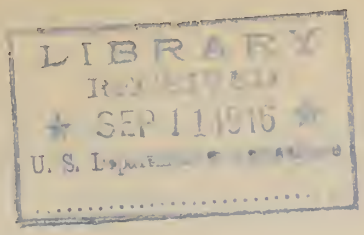

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

AUGUST 19, 1916.

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
August 19, 1916.

Reports for week ending August 12.

Akron:

The greater part of the winter wheat, spring wheat, and barley in the Cereal Investigation variety tests was threshed during the week. It is still dry but temperatures have been a little lower the past week than during the preceding weeks. Corn is not recovering and cane has been standing still except on summer fallow.

Maximum temperature for week 91, minimum 56. Precipitation .19 inch.

Amarillo:

The usual bill of fare weather -hot, dry and windy, has prevailed this past week with no indication of any immediate change for the better. Very little work in the field has been done. It begins to look as though we will have to go ahead with our early fall plowing without any rain. On the D. L. A. plats corn is tasseling and silking out slowly on a small per cent of the stalks. The sorghums on fallows and in rotation plats are heading out in fair shape but the rest of the plats are doing practically nothing.

Mr. H. P. Gould of the Pomology Office spent a day here looking after the station orchard. Mr. Geo. Crawford, who has been here the past few weeks assisting with water requirement experiments, returns to Akron today.

Max. temp. for the week 96 on the 7th., minimum 65 on the 8th and 9th.

Hourly wind velocity 9 miles. Precip. .36 inch on the 7th. Evaporation 2.609 inches.

Big Spring:

Max. temp. for the week 94, minimum 71. Evaporation 2.43 inches, wind velocity 7.9 miles, precipitation .07 inch. The maximum temperature has ranged higher during the week than the previous one; the wind velocity has also been higher. Crops are maturing rapidly and several plats of the variety crops were harvested during the week. The second cutting of Sudan grass was made in the three acre block planted for hay. The yield will probably run better than three-fourths of a ton to the acre. This block was planted in 36 inch rows. Weeds came up very thickly after the rains in the later part of July, and it was necessary to cultivate all plats and crops that had not advanced to high in growth to prevent cultivation. We are experiencing a siege of brown Butterflies that are extremely numerous. They seem to congregate in the largest numbers on the cowpea plats. Their presence make us apprehensive of a large crop of caterpillars later on. Since the arrival of the butterflies in such large numbers, many of the plants in the cowpea plats have become attacked with some sort of disease, which we think probably is being caused by the butterflies carrying disease with them, as they seem to have migrated from the south. Mr. Rothgeb arrived Saturday morning and will spend several days at the station taking observations on the grain sorghums.

Colby:

The past week has been considerably cooler than any during the past month. It has been cloudy a good share of the time, but only .23" of rain has fallen. The kafir and milo which were planted with a lister were cultivated for the second time Tuesday. The ground was so hard and dry that very ineffective work was done. With the coming of the cooler moist weather the sorghums appear to be making some growth.

Max. temperature for week 102, minimum 61. Average hourly wind velocity (2') 7.7 mi., (8') 11.7 mi. Evaporation 2.460". Precipitation .23 inch.

Dalhart:

The drought which has continued for the past 30 days was broken by a 1.43 inch rainfall last Monday night. Some of the crops were too nearly dried up to be benefitted by the rain, but others, especially the later plantings, have responded and are beginning to head. There will be considerable grain to harvest from the sorghums but the yields will be much lighter than last year unless we have considerable more rain within the next few days. The weather continues warm with light winds. Max. temp. for the week 97, minimum 59. Precipitation 1.43 inches.

Edgeley:

Harvesting has been completed on the station with the exception of the barley on rotation 9, which is being harvested now. Rain on Friday interfered with field work the last two days of the week. There is a considerable amount of grain around here to be harvested, but threshing will probably be started some time during the week. Some threshing reports from the southern part of the state indicate very low yields, hardly paying for the harvesting and threshing.

A trip was made about twenty-five miles northeast of here with the Superintendent to see a field of "Rustproof" wheat. This wheat has resisted the rust to a considerable extent, most of the kernels being fairly plump. Immediately across the road from it though was a field of durum in which the grain was also of fairly good quality.

The first three days of the week were quite warm, but the rest of the week was cool and cloudy.

Max. temp. 88, minimum 44. Precipitation .53 inch.

Garden City:

No relief from the protracted drouth has yet been received, and most of the crops not yet harvested are at a standstill. The earlier planted milo and Freed's sorghum are ripening. All of the corn on the D. L. A. Project has been harvested. Potatoes have been harvested and the yields secured were light. Millet and some of the Sudan grass has also been harvested.

Director W. M. Jardine of the Kansas Station visited the station the 11th.

Max. temp. for week 101, minimum 64. Ave. wind vel. (2') 8.5 mi., (8') 12.0 miles. Avaporation 2.796 inches. Precipitation .14 inch.

Hays:

Max. temp. for week 102.5, minimum 65. Precipitation none.

Weather has been generally cooler, but wider extremes in temperature. Crops still suffering from drought.

The work of soil sampling for moisture determinations has been in progress all week.

The station finished threshing on the general fields Wednesday. Total yield of winter wheat not including that raised on the small plats, 12947.5 bushels, an average of a fraction better than 23 bushels per acre for the whole area in wheat regardless of methods.

The station has commenced cutting corn for silage.

Huntley:

The past week has been cool with frequent hard wind storms which damaged the corn to some extent and blew down several trees around the buildings. The third round of soil samples were taken and show the moisture in the cropped plats to be entirely exhausted. Fallow plats have accumulated a little moisture but are still much below their normal capacity. Five of the hogs on the pasturing experiment were sold at 8 cents a pound. Their total weight was 1075 poinds.

Farmers in the neighborhood have commenced threshing and report yields of dry land winter wheat to be from 20 to 35 bushels per acre.

Mr. J. M. Stephens of the Judith Basin station was a visitor here this week.

Maximum temperature 91, minimum 44. Precipitation .17 inch.

Mandan:

The appearance of the station grounds has been improved by the removal from the roads and waste places of all weeds. The hot weather and frequent showers during July were so favorable to weed growth that it was difficult to keep them in check.

Mr. Cole visited the station most of the week. Messrs. Cole, Peterson and Pfaender inspected a shelterbelt planting near New Salem on the ninth, and the following day made a trip into the country and gathered native sand cherries to be used in seedling selection work.

The second crop of alfalfa, two varieties of millet in the variety tests, and all of the flax in the rotations have been cut. Part of the flax in the variety tests have also been cut.

Maximum temperature 90, minimum 47. Precipitation .44 inch.

Woodward:

The past week has been rather cooler and more pleasant than for some time past. On August 8th., .56 inch of rain fell and on August 9th., .18 inch. This did considerable good in bringing the broom corn out of the boot, and relieved the other crops to a considerable extent.

Some plowing was done during the week, corn cut and some broom corn pulle

Ardmore:

Maximum temperature for the week 97; minimum 47. Precipitation .13 inch.

All plats and fields of small grain were threshed during the week. Ave. yields of all plats were as follows:- Wheat, 20.5 bushels; winter wheat 31.3 bushels; oats 39.8 bushels; barley 25.8 bushels; flax 6.7 bushels. Deep Tillage plats and field crop rotations are not included in these averages. The yield of both wheat and oats in the field crop rotations were better than the average of the plats.

Bellefourche:

Warm dry weather during the early part of the week dried out the small grain enough so that threshing could be started. On the 9th and 10th the barley, winter wheat, wheat, and most of the oats were threshed. A rain of .93 inch on the 10th and cloudy weather the rest of the week prevented any more threshing being done. The rain was of great benefit to the row crops. There is now almost enough moisture in the soil to carry the corn to maturity.

Fall plowing was started on the 10th. The sod land to be plowed in the hay rotations, and the early fall plowed plat of winter wheat were plowed on that date.

Max. temp. for the week 96; minimum 46. Precipitation 1.22 inches.

Lawton:

The past two weeks have been very hot and dry and during the last few days the winds have been strong and hot. Such a condition has changed the crop prospects in this part of the country very materially and very rapidly. All corn on the station was cut and put in the shock on the 11th, 12th, 14th, and 15th. With reference to the grain the corn crop is a failure and the fodder is so rotten with bugs and badly burned that it is of very poor quality. Our kafir corn is holding on and looking as well as could be expected under such conditions. However, some farmers are reporting their kafir as burning badly and this is probably true in fields that are weedy. Whether the kafir will be able to survive the work of the chinch bugs now since the corn is cut will be an interesting point. I am of the opinion that the late kafir will be destroyed. All milo that was replanted in July is again destroyed by chinch bugs. The MC cane plats are also being damaged by the bugs. The cotton plants are looking fairly thrifty and vigorous but very little fruit is setting and the crop will be unusually light unless later rains bring on a later crop of bolls. Cowpeas and soy beans have ripened very rapidly during the hot weather but have stood the severe conditions in a very satisfactory manner.

Mr. H. P. Gould visited the station on the 8th, and Mr. B. E. Rothgeb visited the station on the 10th and 11th.

The fall army worm continues to do some damage and the web worm made it necessary to cut the alfalfa and sweet clover plats. The web worm has also been damaging two plats of cotton. We are trying to control it by the use of the poison bran mixture and by mechanical means also.

The county agents of the southwestern district of this State will hold

Lawton, Continued:

a meeting at Medicine Park on the 16th, 17th, and 18th of this month. The forenoon of the 16th. will be spent at this station in looking over the work and giving special attention to the cotton experiment that is being carried on here. Dr. Saunders will lecture to the men in the field and instruct them concerning the selection of seed.

Three hundred feet of 2½" fire hose and a reel were received last week for fire protection.

North Platte:

Cooler weather has prevailed during the week. A fair rain occurred on the 11th. This will benefit the corn but there will be many stalks without ears. Present indications are for about one-half a crop.

The first of the early fall plowing of plats is being done.

Max. temp. for week 100; minimum 55; mean 75. Precipitation .72 inch. Evaporation 2.13 inches.

The following table gives the results secured this year in seeding spring grains at different dates:

		Mar.31	April 6	April 18	April 29
			Bushels per acre		
Oats	-Kherson	57.2	54.2	14.7	13.1
Wheat	-Kubanka	20.8	17.8	10.0	8.0
Barley	-Common	32.3	31.3	21.9	16.3
Emmer		28.8	11.3	3.3	2.0

Williston:

All dry land grain plats were harvested excepting flax, two plats of oats, and four plats of wheat. These will be cut early next week. Indications are that the yields will be above the average.

Corn is well eared, and is now almost in the roasting ear stage.

There is plenty of moisture in the soil for fall plowing and the development of the later crops.

The rust epedemic has spread to this section of the state, and developed greatly within the last week. It is estimated that above fifty per cent of the yield will be lessened for this section.

Max. temperature 83; minimum 38. Precipitation .02". Nights are very cool.

Sheridan:

The warm weather of the past few weeks has been succeeded by cooler weather, but no rain has fallen although it has been cloudy most of the week.

A right of way from the County road which is a quarter of a mile from the station to the station has been purchased, and the fencing completed on both sides of it, preparatory to grading the road. The C. B. & Q. R. R. are to put in cattle guards at the crossing.

Slightly more than 100 acres of land has been broken, but the teams have been put onto road work for the present. The ground was getting very dry for breaking

Sheridan, Continued:

The forage field of sorghum has made a splendid growth during the past two weeks. It now stands about 2½ feet high and was seeded on the 23rd of June.

Shingling is practically finished on the Barn and Implement Shed, as well as on the Office Building. Both buildings are being sided and will soon be completed. The Mess House has been finished and we are now using it for that purpose. Nothing has been done on the Superintendent's Residence during the past week, except the rough plumbing, which also has been put in the Office Building.

Tucumcari:

Average hourly wind velocity 6.6 miles per hour.

Maximum temperature 96 on the 10th; minimum 63.

Evaporation 2.220 inches. Precipitation 1.78 inches, consisting of .58 inch on the 8th. and 1.20 inches on the 11th.

The rain recorded on the 8th was the heaviest rain recorded here since the 15th of April when .58 of one inch was also recorded. Both of the rains of this past week fell at night. From the first there was practically no run-off whereas from the second there was more as the rain was torrential in character. The plat field had all been cultivated within a week and on account of the ground being rough from this cultivation the run-off from these rains was not as great as it might otherwise have been.

Sorgos and other crops which had not headed are shooting and their yields will probably be comparatively heavy. Cotton is showing bolls, cowpeas have flowers and pods, milo is practically all headed. Birds are bothering our sorghums very badly and we have resorted to both shooting and poisoning them. The poison works fairly well, but since most of the bothersome birds are migratory, only temporary relief is afforded. If birds are not too bad, I expect that our kafir and milo yields will be up to the average, in grain at least.

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE.

AUGUST 26, 1916.

WEEKLY STATION REPORTS
DRY LAND AGRICULTURE INVESTIGATIONS
August 26, 1916.

Reports for week ending August 19.

Akron:

The past week has been spent largely in cultivating fallow and intertilled crops to kill weeds. The light showers of the past two weeks have germinated a large number of weed seeds and they are coming up very thickly in the corn, cane, and forest trees. The corn is so small that it can be easily cultivated with the two horse cultivator. The corn on fallow and on the continuously cropped plats will probably mature some corn, but there is no other plat that will mature more than a few scattering nubbins.

Dr. H. L. Shantz and Mr. R. L. Piemisel left on Saturday for an extended trip through the Western states.

Maximum temperature for the week 92; minimum 55. Precipitation .37 inch.

Amarillo:

This week has seen the hot spell fairly well broken but the drouth still remains in spite of the fact that it has clouded around every day with promise of rain. We received two or three small showers out of which came .18 inch of rain, which was about a third what those showers amounted to in town. The early fall plowing on the D.L.A. plats was nearly completed this week. The soil turned up in fair shape on most of the plats, except where small grain had been seeded on disked corn or sorghum ground.

Maximum temperature 98 on the 13th and 14th; minimum 61 on 18th.

Wind velocity 9.2 miles.

Evaporation 2.718 inches.

Bellefourche:

Threshing on the dry land plats was finished on the 17th. Oats averaged 33.4 bu. per acre. The highest yield was 49.8 bu. on Rot. 19 and on Plat C of the MC series. The lowest yield was 13.3 bu. on Rot. 3. The flax plat in rotation 12 yielded 3.4 bushels per acre.

A few ears of corn have reached the roasting ear stage. There is apparently enough moisture in the soil to insure a crop. Sorghum has grown rapidly of late. It is now headed out and is taller than the corn.

Maximum temperature 96; minimum 50. Precipitation trace.

Big Springs:

Most of the week has been dry and windy, the prevailing direction of the wind varying from south-east to the south-west. Maximum temperature 97; minimum 68. Wind velocity 8.7 miles. Evaporation 2.78 inches. Precipitation .15 of an inch.

Several variety plats were thrashed during the week and the following yields were secured:-

Crop	Yield per Acre Grain	Fodder
Feterita, C. I. No. 182	15.0 bu.	1820 lbs.
Whooper Sorghum	15.7 bu.	3930 lbs.
Dorso Sorghum	12.1 bu.	1270 lbs.
Freed Sorghum	13.9 bu.	1680 lbs.
Orange Sorghum	-------	2140 lbs.
Sudan Grass (2 plats Ave. yield)	490 lbs.	3610 lbs. hay

While the above yields are light as compared with those secured last year, we think they are good when the precipitation records for 1916 are considered. From Jan. 1st. to Aug. 15, 1916, the amount of precipitation received totals 8.27 inches, which fell in 28 different showers. During the same period last year, we received 13.25 inches, or 4.98 inches more, than this season.

Crops as a whole are doing very well considering conditions. Some of the early varieties of cotton are beginning to open. The butterflies mentioned in last week's report, still remain with us in large numbers. From reports received, they are quite numerous in several counties in this section. It has been determined by observation, that they are causing the flowers of the cowpeas to drop off on account of sucking the juice from the flower and stems.

Colby:

The week has been windy, mostly dry, and comparatively cool. Corn continues to dry, and the sorghums are beginning to wilt. Plats M.C.B of corn, milo and kafir are suffering considerably more than any of the other plats of the M. C. series, growing the respective crops. The only work done on the plats this week was some cleaning up with the hoe. The surface planted corn with the exception of M. C. C will be cut this coming week.

Maximum temperature 101; minimum 60. Precipitation .19 inch.

Supt. Clark who has been spending the last two weeks in eastern Kansas and in Missouri is expected back Monday, the 21st.

Dalhart:

The weather during the past week has been cool and cloudy. All of the crops have made a good growth. Some of the earlier plantings of milo are fully headed but are poorly filled. The kafirs are heading but it is early yet to tell whether or not they will fill well. There will be some ears on a few of the corn plats but the yield will be very light. Some of the corn plats will not have an ear on them. A few of the corn plats are drying up rapidly and will be cut within the next few days. The different methods of cultivation are showing some very striking results.

Maximum temperature for the week 97; minimum 62. Precipitation .25 inch in three showers.

Edgeley:

The first two days of the week were cool and cloudy, but the remainder was very warm with heavy winds during the day. Harvesting on the station has been completed, but no threshing has been done yet. A heavy rain has just fallen so that threshing will be delayed considerably now. Some threshing has been done around here, the grain for the most part being uniformly poor. Averages for wheat run all the way from two to ten bushels, the most of it going No. grade or No. 4.

The brome grass plat in Rotation 10 and the clover plat in Rot. 11 were plowed during the week. The second cutting of clover was taken off, the yield being 1700# per acre, making a total this year of 5700#. The third cutting was taken from the alfalfa plat in rotation 42 that is to be plowed this year, the yield being about 1800#.

Maximum temperature 97; minimum 37. Precipitation none.

Garden City:

Precipitation amounting to 2.20 inches occurred during the fore part of the week which has greatly revived sorghum crops. The rain fell quickly, however, and there was considerable run-off. The moisture penetrated deeply enough though to enable fall plowing to be done, but most of the D. L. A. early fall plowing had been done before the rain.

Some grain may now be produced on a few of the kafir and milo plats.

Two plats of Freed sorghum which had produced a good grain crop were visited by large numbers of sparrows and all grain eaten off in a couple of days. The sparrows are now feeding on other sorghum plats where the grain is beginning to mature.

Maximum temperature for the week 100; minimum 60.

Evaporation 2.494 inches.

Hays:

The past week has been little more moderate in temperature, but generally, quite windy,- more windy than for some time. Two small rains of .20 and .57 inches on the 15th and 16th respectively brought temporary relief to the crops, but the wind has now carried away about all the moisture that fell except that which the crops have used, so rain is again badly needed.

Thursday a trip was made from the station covering some distance south, east and north to inspect field conditions. During the trip it was observed that practically all the threshing within sight of the route covered had been finished. It was also noted that very little plowing for wheat has been done. Apparently while the ground has been so dry and hard for plowing the farmers have given up plowing and taken advantage of the dry weather for threshing. Now since the threshing is finished, and rain has not yet come many of the farmers have commenced double disking the stubble land. If it rains within the next two weeks a good many of the farmers who are disking say they will plow. Others will seed without plowing.

On the trip it was also observed that grasshoppers have very badly damaged many fields of corn which would have made a large quantity of good fodder even though there is no grain on it.

Mr. H. N. Vinall from the Office of Forage Crop Investigations, Washington, D. C. visited the station Friday.

A good many visitors from out of town have visited the station during the week.

Huntley:

Threshing of the dry-land crops was completed Tuesday of this week. Average yields were uniformly low and quality only fair. Maximum and minimum yields were as follows:-

Winter wheat,	Max.	35.5 bu.	on fallow;	Minimum 7.2 bu.	also fallow.
Spring wheat,	"	21.7 bu.	" "	" 5.8 "	MC A.
Oats,	"	66.6 bu.	F.P.Wht.Stubble	" 13.1 "	S.P.Wht.stub.
Barley,	"	37.7 bu.	Rye fallow;	" 7.7 "	MC A.
Flax,	"	13.6 bu.	on fallow;	" 2.7 "	S.P.Oats Stub.

The small showers since harvest have germinated the grain and weed seeds scattered over the plats and a good growth is being made. Corn is being made. Corn is beginning to dry up again, especially the plats that made the best growth early in the season.

Mr. N. C. Donaldson and Mr. Moomaw both of the Judith Basin station visited the station this week.

Maximum temperature for the week 95; minimum 46. Precipitation .05"

Judith Basin:

Oats and barley on rotation plats are harvested. The flax and spring wheat will be harvested the latter part of this week. Corn is beginning to wilt and needs moisture badly. While the season has been one of the driest and most unfavorable for the growth of crops in the history of the station, we are going to obtain a fairly good yield of all crops.

Lawton:

The past week has been hot, dry and windy and the winds have been pretty hot most of the time, however, the night temperatures are not all excessive. We have not had any rain since the 20th of July at which time we had a .3 inch rain and that was quite local. The greater portion of the southwestern part of the state had been without rain much longer than that and the same condition is true in eastern parts of the state.

Cane in Rotations 133 and 134 seems to be suffering severely and has been for some time. The cane in the MC series is being rapidly destroyed by the chinch bugs and most of these plats will probably succomb unless more favorable growing conditions obtain within a short time. The late corn replanted during the latter part of June and the first of July was harvested on the 19th. This corn was on average about four feet high and just beginning to tassel. The chinch bugs were rapidly putting it to the ground and a second crop of the fall army worms were becoming quite destructive. There was practically no chance for the corn to make a recovery so it was decided to cut it before it all fell to the ground.

Cowpeas on rotation 276 in three and one-half foot rows, were cut for hay on the 16th. The yield was 3.65 tons per acre.

The same variety of peas seeded with the grain drill on Rotations 201 and 142 at the rate of 50 pounds per acre have not made as heavy a growth except at the ends of the plats and along the edges. The peas on these plats will be plowed under on the 21st. In order to determine the approximate amount of forage that will be turned under, a representative sample was taken from each plat and cured. It is estimated that the peas on 142 will yield about 5436 pounds of dried material and 201 will yield about 6493 pounds per acre. Red amber planted 5.29, C. I. No. 182 planted 5.15 and Dwarf kafir C. I. No. 342 planted 4/21 were harvested on the 19th.

The cotton plants continue to look fairly thrifty. They are blooming heavily but the bloom is rapidly dropping and extremely few bolls have been set as yet. The cotton prospects throughout Oklahoma are very poor at the present time and a pretty high price is predicted.

There will be some corn on the bottom lands in this part of the country, but the most of it will be of poor quality.

On the 16th the County agents in the southwestern district of this state together with several others spent the forenoon in looking over the cotton work that is being done on the station. Mr. Saunders and Mr. Maloy of Greenville, Texas were present and lectured to the men in the afternoon at Medicine Park which is about 14 miles from Lawton. The writer spent two days with this group of men studying cotton, corn and Kafir.

Mandan:

On account of the continued dry weather some of the vegetable crops are ripening up prematurely.

Mr. Donaghue and Mr. Thomas of the North Dakota Experiment Station, visited the station on the seventeenth and Director Cooper on the eighteenth. Mr. Theo Stoa, of the Office of Cereal Investigations, with field headquarters at Fargo, spent the 17th and 18th at this station, leaving with Mr. Charles H. Clark for Dickinson and other Western stations on the 18th.

All millets, except one variety, were cut this week.

Threshing oats will be completed today. Yields run from 40 to 80 bushels - weighing 32-lbs. to the bushel. The poorest yield was on brome sod, while the highest was on green manure after sweet clover.

Maximum temperature 95; minimum 40. Precipitation .17 inch.

North Platte:

Early fall plowing of plats and fields has continued during the week. Fourty-seven hundredths inch of precipitation has occurred in two showers bringing the total for August so far up to 1.21 inches. This has not been sufficient to wet the soil the full depth of eight inch plowing on stubble ground. In plowing a considerable difference was noted between land which had been deep tilled for several years and that that which is being deep tilled for the first time. The former was moist to the full 14 inch depth of plowing and worked up mellow while the latter was moist only about 6 inches in depth and broke up hard and cloddy.

The week has been somewhat cooler. Maximum temperature 95; minimum 55. August 13th the maximum was only 66, which is the lowest recorded since June 7, and the only maximum below 80 since July 1.

Scottsbluff:

We have had cool weather this week with showers on three days totaling 2 inches. Heavy fog prevailed on the 13th and 14th.

Corn made satisfactory growth, although smut is getting pretty bad. Soil sampling reveals ample moisture for the crop.

The second crop of hay has just been harvested, and we expect to commence threshing next week.

Mr. F. D. Farrell was here the first part of the week.

Sheridan:

Another dry week has passed, and out twelve acres of sorghum is about the only green dry land crop I have seen. No suffering in its appearance and it is heading out at a height of about 30 inches.

Work on the road connecting the station and the County road has been begun, and we are now waiting for the railroad to put in a crossing.

Sheridan, Continued.

Excavating for the pit where the pressure tank and electric light plant are to be installed has been started, and excavation for the sewer is about completed.

Lathing has been finished on the Office Building, and ceiling of certain rooms is in progress. All siding has been put on, the shingling completed, and the chimney is through the roof.

All siding, shingling and trimming on the Barn and Implement Shed has been completed and the doors and windows are being placed.

Mr. John S. Cole visited the Station between trains on the 18th.

The writer leaves for Archer tomorrow to look after the work at that station.

Tucumcari:

Maximum temperature for week 96 on the 15th; minimum 62 on the 19th.

Average hourly wind velocity 6.6 miles per hour.

Evaporation 2.183 inches. Precipitation .13 inch on 13th., .06 inch on 14th., T on 16th., .09 inch on 17th., and T on 18th, Total .28 inch.

Although the rainfall for the week was rather light, the small showers which occurred and the cloudy weather all helped to prevent excessive evaporation from the rains of last week.

Practically all crops have made a wonderful growth during the past week and many are looking as well as in any average year. Cowpeas and saccharine sorghums have made the best growth this past week and are looking mighty well. Some plats of Red Amber sorghum average 7 feet in height and a number of varieties of cowpeas all but cover the rows with their growth.

The birds continue to damage the grain sorghums and in spite of poison and a mighty good shot-gun, some of the plats of milo have very little grain left in the heads. The birds seem to be worse in dry years than in favorable years.

Many old timers around this section say that this is the worst year for crops and grass that they remember, but in spite of a deficiency of 5.00 inches of precipitation up to the first of August and in spite of its being one of the worst crop seasons on record, we are demonstrating that at least feed crops can be grown here.

During the week about 2 acres of Freed Sorghum was planted for demonstrating that late planted feed crops could be secured.

A trip was made on Thursday to a point about 35 miles southeast of town. No crops of any consequence were seen. Except for a few fields of corn, and wheat, nothing has been seen this season which compared favorably with Station crops.

The principal work for the week has consisted of plowing out some land for planting trees next spring, of discing two one-acre plats one of which will be planted to alfalfa and the other to sweet clover for pig pasture work. Soil samples were taken on 570 and on Corn M. C. and stand counts of plats made.